

WHAT IS CLAIMED IS:

1. An information processing method for demultiplexing object streams from a datastream which including a plurality of object streams each having
5 predetermined information, and decoding, synthesizing, and outputting each of the object streams, comprising:

a) an authentication step of authenticating the object stream; and

b) a control step of controlling playback of the
10 object stream in accordance with an authentication result of said authentication step,

wherein said control step includes a step of determining in accordance with an authentication method whether or not the playback control is done before or
15 after decoding of a predetermined object stream.

2. A method according to claim 1, wherein information in the predetermined object stream has undergone high-efficiency coding.
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3. A method according to claim 2, wherein said control step includes a step of controlling playback of the predetermined object stream by stopping or executing decoding of the information that has
25 undergone high-efficiency coding.

4. A method according to claim 1, wherein said

control step includes a step of controlling playback of the predetermined object stream in accordance with an intellectual property management stream contained in the plurality of object streams.

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5. A method according to claim 4, wherein said authentication step includes a step of authenticating the predetermined object stream in accordance with the intellectual property management stream.

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6. A method according to claim 5, wherein said authentication step includes a step of determining in accordance with a type of the intellectual property management stream whether the authentication is done before or after decoding of the predetermined object stream.

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7. A method according to claim 5, wherein said authentication step includes a step of determining whether the authentication is done before or after decoding of the predetermined object stream, depending on whether or not inherent intellectual property information used in authentication is embedded in the predetermined object stream as a digital watermark.

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8. A method according to claim 1, wherein the plurality of object streams are MPEG-4 bitstreams.

9. A method according to claim 4, wherein said control step includes a step of controlling playback of the predetermined object stream by managing multi-thread processing in units of streams on the basis of the intellectual property management stream.

10. A computer readable storage medium storing a program of information processing of claim 1.

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10 11. An information processing method for demultiplexing object streams from a datastream which includes a plurality of object streams each having predetermined information, scene description information for synthesizing information contained in
15 the plurality of object streams, and management information for managing a copyright of the information, playing back each information, and synthesizing and outputting the information on the basis of the scene description information, comprising:

20 a) an authentication step of authenticating at least one object stream on the basis of the management information; and

b) a control step of controlling playback of the object stream in accordance with an authentication
25 result of said authentication step,

wherein said control step includes a step of determining in accordance with an authentication method

whether the playback control is done before or after
decoding of the object stream.

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12. A computer readable storage medium storing a
5 program of information processing of claim 11.

13. An information processing apparatus for
demultiplexing object streams from a datastream which
includes a plurality of object streams each having
10 predetermined information, and decoding, synthesizing,
and outputting the object streams, comprising:

a) authentication means for authenticating the
object streams; and

b) control means for controlling playback of the
15 object streams in accordance with an output from said
authentication means,

wherein said control means determines in
accordance with an authentication method whether or not
the playback control is done before or after decoding
20 of a predetermined object stream.

14. An apparatus according to claim 13, wherein
information in the predetermined object stream has
undergone high-efficiency coding.

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15. An apparatus according to claim 14, wherein
said control means controls playback of the

predetermined object stream by stopping or executing decoding of the information that has undergone high-efficiency coding.

5 16. An apparatus according to claim 13, wherein said control means controls playback of the predetermined object stream in accordance with an intellectual property management stream contained in the plurality of object streams.

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 17. An apparatus according to claim 16, wherein said authentication means authenticates the predetermined object stream in accordance with the intellectual property management stream.

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 18. An apparatus according to claim 17, wherein said authentication means determines in accordance with a type of the intellectual property management stream whether the authentication is done before or after decoding of the predetermined object stream.

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 19. An apparatus according to claim 17, wherein said authentication means determines whether the authentication is done before or after decoding of the predetermined object stream, depending on whether or not inherent intellectual property information used in authentication is embedded in the predetermined object

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stream as a digital watermark.

20. An apparatus according to claim 13, wherein the plurality of object streams are MPEG-4 bitstreams.

21. An apparatus according to claim 16, wherein said control means controls playback of the predetermined object stream by managing multi-thread processing in units of streams on the basis of the intellectual property management stream.

22. An information processing apparatus for demultiplexing object streams from a datastream which includes a plurality of object streams each having predetermined information, scene description information for synthesizing information contained in the plurality of object streams, and management information for managing a copyright of the information, playing back each information, and synthesizing and outputting the information on the basis of the scene description information, comprising:

a) authentication means for authenticating at least one object stream on the basis of the management information; and

b) control means for controlling playback of the object stream in accordance with an output from said authentication means,

wherein said control means determines in accordance with an authentication method whether the playback control is done before or after decoding of the object stream.

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23. An information processing method comprising:

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a) an input step of inputting encoded information data, and management data used to protect an intellectual property right of the information data;

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b) a discrimination step of discriminating an authentication method for the information data on the basis of the management data; and

c) a control step of making playback control of the encoded information data,

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wherein said control step includes a step of controlling in accordance with a discrimination result of the discrimination step whether the playback control in the control step is done before or after decoding of the information data.

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24. A method according to claim 23, wherein the information data is a datastream containing a plurality of object streams each having predetermined information.

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25. A method according to claim 24, wherein the datastream complies with MPEG-4 standards.

26. A method according to claim 25, wherein the management data is IPMP data complying with the MPEG-4 standards.

5 27. A method according to claim 23, wherein the information data is image data.

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28. A method according to claim 23, wherein the information data is audio data.

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29. A method according to claim 23, wherein said discrimination step includes a step of discriminating if authentication is done using a digital watermark.

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30. An information processing apparatus comprising:

a) input means for inputting encoded information data, and management data used to protect an intellectual property right of the information data;

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b) discrimination means for discriminating an authentication method for the information data on the basis of the management data; and

c) control means for making playback control of the encoded information data,

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wherein said control means controls in accordance with a discrimination result of said discrimination means whether the playback control in the control step

is done before or after decoding of the information data.

5 31. An apparatus according to claim 30, wherein the information data is a datastream containing a plurality of object streams each having predetermined information.

10 32. An apparatus according to claim 31, wherein the datastream complies with MPEG-4 standards.

15 33. An apparatus according to claim 32, wherein the management data is IPMP data complying with the MPEG-4 standards.

34. An apparatus according to claim 30, wherein the information data is image data.

20 35. An apparatus according to claim 30, wherein the information data is audio data.

36. An apparatus according to claim 30, wherein said discrimination means discriminates if authentication is done using a digital watermark.

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